

Tailoring Earned Value Management

General Guidelines

Eleanor Haupt

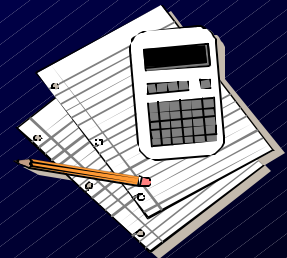
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General Principles

- Consider all risk factors when tailoring EVMS
 - type of contract (determined by cost risk)
 - technology
 - schedule
 - past contractor performance
- May be bound by customer policies (e.g. DOD)
 - Most aspects are still able to be tailored
- Should be tailored to reflect internal management
 - should not be seen as customer report
- Written variance analysis is #1 cost driver
 - only ask for what you really need
- Apply common sense!
- Dialogue with industry



A Spectrum of Implementation

Where	Commercial or Defense		Government Organic	Major Defense Contractors
	Small Companies	Larger Companies		
When	Foreign Countries			
	as desired	corporate policy, "enterprise wide"	FFP contracts?	
Reports	streamlined, no paper?	tailored to needs	DoD Non-Major Contracts (>12 months) <\$6M* >\$6M C/SSR	DoD Major Contracts >\$73M RDT&E >\$315M Prod CPR
	5 Core EV Principles	Tailored Applications	ANSI/EIA-748-1998 (32 criteria)	

*with judgement

All \$ are BY00

OMB Guidance

- Agency should define thresholds and applications
- Get the basic data (BCWS, BCWP, ACWP)
- Explain variances $>10\%$ in annual reports
- Explain corrective actions
 - EAC
 - terminate?
- OMB approves baseline changes
 - at program level

A Special Note about DOD

- EVMS started in DOD over 1/3 century ago
- DOD generally awards large, complex contracts
- Considered to be “high end” of EVMS implementation
 - Still can and should be tailored

One size does not fit all

Risk Factors to Consider

<div>LOW RISK</div> <div>HIGH RISK</div>	Cost Risk to Agency	Technology Risk	Schedule Risk	Contractor Past Performance
	Cost Contracts	State of the art or beyond IT and software development	Complex schedule, concurrency	Poor
	FPI Contracts	Under development	Moderate risk, some concurrency	
	FFP Contracts	Off the shelf	Low Risk schedule	Good

How can EVMS be tailored?

- Application thresholds
- Guidelines
- Validation of system
- Baseline assessment
- Earning performance
- Reporting
- Analysis
- Surveillance

Tailor EVMS to Inherent Risk



Application Thresholds - DOD Model

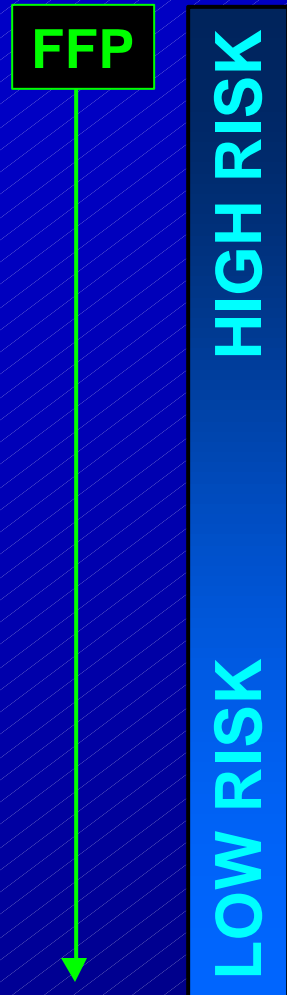
HIGH RISK

- Full compliance with criteria, with CPR
 - \$73M development (BY00\$)
 - \$315M production (BY00\$)
 - \$315M O&M (BY00\$)
 - not on firm fixed price contracts
- CPR, no criteria
 - below \$ thresholds
 - if CPR level reporting is needed

LOW RISK

- C/SSR, no criteria
 - below CPR criteria
 - greater than 12 months and \$6M
 - below \$6M with judgement

Application Thresholds



- Agency policy should define thresholds
 - > 12 month effort
 - Significant investments (\$ threshold ?)
 - FFP, incentive, or cost contracts

Exclusions at all levels

- level of effort
- time and material
- <12 month total effort

- Agency recommendations
 - >12 months
 - Agency defined floor (e.g., >\$10M)

Guidelines

Current Status

- ANSI/EIA-748 is the industry standard
 - 32 guidelines (formerly known as criteria)
 - have stood the test of time
 - have been applied to significant projects in past
 - typically, government projects requiring full compliance
- Smaller projects
 - contractors could use validated system
 - if not validated, contractors needed to show how their system met general principles in C/SSR DFAR clause
- Commercial
 - wide range
 - some contractors have tailoring policy

Application of Guidelines

- Full compliance with ANSI/EIA-748
- Recommend application of ANSI/EIA-748
- Contractor tailoring as desired
- 5 Basic Guidelines

HIGH RISK

LOW RISK

FFP



5 Basic Guidelines

- **Organize the project team and the scope of work**, using a work breakdown structure. Each task should have a single WBS number and organizational code.
- **Schedule the tasks in a logical manner** so that lower level schedule elements support other elements and the top level milestones.
- **Allocate the total budget resources** to time-phased control accounts.
- **Establish objective means for measuring work** accomplishment. Budget should be earned in the same way that it was planned.
- **Control the project** by analyzing cost and performance variances, assessing final costs, developing corrective actions, and controlling changes to the integrated baseline.

Validation Options

- Validation by customer
 - U.S. government, Australia, other countries
- Third party
- Self-certification
- Submission of summary description to customer
 - (optional) may use already validated system
- None

HIGH RISK

LOW RISK

FFP



Baseline Assessment

HIGH RISK

LOW RISK

FFP

- Formal review by customer
- Joint development of baseline
 - post award (phased: technical, schedule, budget)
 - pre award
- Integrated into program reviews
- Incremental
 - evolutionary acquisition, significant milestones, task orders, etc.
- Walk through, talk through
- Assess schedule and EV measurement only
- Self assessment

Earning Performance

HIGH RISK

LOW RISK

FFP

- Performance earned at control account level
 - summed up from detail level
- Performance earned by logical means at higher level

Reporting

HIGH RISK

LOW RISK

FFP

- Full performance reports (detailed cost level)
- Tailored reports (eliminate certain formats)
- Contractor defined significant variances
- Report at price or hours (FFP)
- Contractor shares internal reports
- On line, no paper
- No formal variance analysis
- Tabular or graphical status

**always tailor
data
reporting
level to risk**

Analysis

HIGH RISK

LOW RISK

- Formal analysis
 - by both contractor and customer
- Formal analysis by contractor
 - provided to customer
- Incorporated as part of program reviews
- Top level analysis by both or by contractor

FFP



Surveillance

HIGH RISK

LOW RISK

- Formal surveillance by in plant team
 - metrics, formal reports
- Periodic surveillance by visiting team (metrics)
- Self reported metrics
- None

FFP

Additional Thoughts on FFP Contracts

- Place emphasis on controlling
 - technical growth
 - schedule
- Ensure integration of work and schedule
- Use EVMS as basis for payments
 - performance metrics
 - significant milestones (contract deliverables)
- Use contractor tools and reporting

The Bottom Line

- EVMS *can* and *should* be tailored
 - Should not be seen as a cost driver
 - Should always make common sense
 - Should always reflect how projects are managed on a daily basis